

## Claims:

1. An electrode structure (10) for attachment to a more extensive measuring structure (11), in order to measure electrical responses from the human body, which electrode structure (10) includes a conductive electrode (1), characterized in that

- the electrode (1) is shaped to be thin in the thickness direction of the electrode structure (10), and  
- the electrode structure (10) is equipped with a hole (6) and the electrode (1) is located at the edge of the hole (6), in such a way that its longitudinal axis is essentially parallel to the plane of the measurement subject.

2. An electrode structure (10) according to Claim 1, characterized in that the electrode (1) is formed from silver/silver-chloride (Ag-AgCl), in order to form electrically stable interfaces between the measurement subject and the measuring electronics.

3. An electrode structure (10) according to Claim 1 or 2, characterized in that the electrode (1) is thinner than 5 mm and most preferably thinner than 2 mm.

4. An electrode structure (10) according to Claim 1, 2, or 3, characterized in that the electrode structure (10) is attached to the measuring structure (11) using a two-part snap-fit mechanism (2, 3).

5. An electrode structure (10) according to any of the above Claims, characterized in that the electrode (1) is connected to the measuring lead (4) with the aid of a wire (5) of pure silver (Ag).

6. An electrode structure (10) according to any of the above Claims, characterized in that the electrode structure (10) is equipped with a hole (6) and the electrode (1) is located at the edge of the hole (6), and that the diameter of the hole (6) is at least 2 mm, most preferably at least 4 mm.

7. An electrode structure (10) according to any of the above Claims, characterized in

that the electrode (1) is cylindrical and the longitudinal axis of the electrode (1) is essentially parallel to the plane of the measurement subject.

8. An electrode structure (10) according to any of the above Claims, characterized in that the electrode structure (10) is formed of body part (2), in which a curved opening is formed, and a locking part (3), which locks into the curved opening in the body part (2).

9. An electrode structure (10) according to any of the above Claims, characterized in that the electrode (1) is of a small size, so that a cross-section along any plane whatever of the electrode (1) has a surface area of less than  $15 \text{ mm}^2$ , most preferably of less than  $4 \text{ mm}^2$ .

10. An electrode structure (10) according to any of the above Claims, characterized in that the electrode (1) is manufactured by sintering from a silver/silver-chloride mass (Ag-AgCl).

11. An electrode structure (10) according to any of the above Claims, characterized in that the structure is thinner than 5 mm, most preferably thinner than 2 mm.

12. A measuring cap (11) for measuring electrical responses from the human body, which measuring cap includes one or more electrode structures (10) and electrical leads (4) connected to them for transmitting the measurement results to the measuring equipment, characterized in that the electrode structures (10) are according to any of Claims 1 - 10, or to a combination of them.

13. A measuring cap (11) according to Claim 12, characterized in that the measuring leads are wound into a tight, preferably spiral bundle, in order to reduce interference.

14. A measuring cap (11) according to Claim 12 or 13, characterized in that the earth and reference electrode leads are wound tightly to each other, in order to reduce interference.

15. A measuring cap (11) according to any of the above Claims 12 - 14, characterized in

that the measuring leads are run from the electrodes towards the front of the cap, in order to reduce interference.

16. A method for attaching the silver lead (5) of an electrode (1) to a measuring lead (4),  
5 characterized in that the measuring electrode (1), which includes a silver/silver-chloride (Ag-AgCl) electrode (1) and a silver lead (5) connected to it, is attached to the measuring lead (4) using an electrically conductive connection, for example, by soldering or crimping, forming the electrically conductive connection in such a way that the electrode does not touch the connection point, nor does the electrode touch magnetic  
10 material, nor is heat conducted to the electrode to such an extent that the sintered electrode structure will alter.